metos

DISHWASHER
WD-4

(translation of the original documentation)

Installation and user manual

4_01

S/N: Valid from: 01. 02. 2012 Rev.: 2.0

Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

All rights are reserved for technical changes.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

METOS TEAM

Metos service phone number:.....

Contact person:.....

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1. General

Read the instructions in this manual carefully as they contain important information regarding correct, effective and safe installation, use and service of the dishwasher.

Keep this manual in a safe place for eventual use by other operators of the dishwasher.

The electronics in the machine are RoHS compatible.

1.1 Symbols used in this manual

This symbol warns of situations where a safety risk may arise. Given instructions should be followed in order to prevent injury.

This symbol on a machine part warns of electrical equipment. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.

This symbol explains the right way to perform a task in order to prevent poor results, damage to the dishwasher or hazardous situations.

This symbol gives recommendations and hints that help to get the best performance from the machine.

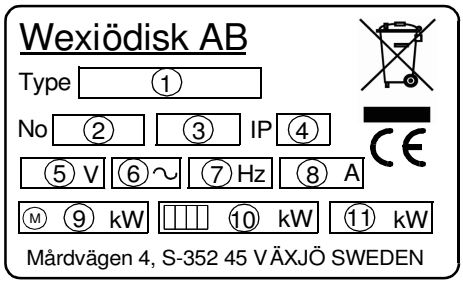
This symbol explains the importance of careful and regular cleaning of the machine to meet hygiene requirements.

1.2 Symbols on the dishwasher

This symbol on a machine part warns of electrical equipment. The part may only be removed by a qualified electrician or trained personnel. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.

1.2.1 Machine marking

The machine has two rating plates, one of which is placed at the bottom of one side of the machine and the other in the electrical cabinet. The technical information on the plates is also included on the machine's wiring diagram. The various rating fields show:



marks_07

1. Machine type
2. Machine number
3. Year of manufacture
4. Enclosure class
5. Voltage
6. Number of phases with or without zero
7. Frequency
8. Main fuse
9. Motor output
10. Electrical heating output
11. Max. output

1.3 Checking agreement between the appliance and the manual

Check the type description on the rating plate agrees with the type description on the front of the manual. If manuals are missing, it is possible to order new ones from the manufacturer or the local representative. When ordering new manuals, it is important to quote the machine number found on the rating plates.

2. Safety instructions

2.1 General

The machine is CE marked, which means that the machine complies with the requirements of the EU machinery directive with regards to product safety. Product safety means the machine has a design which prevents personal injury or damage to property.

Modification to the equipment without the approval of the manufacturer invalidates the manufacturer's product liability.

To further improve safety during installation, operation and service, the operator and personnel responsible for installation and servicing of the machine should read through the safety instructions carefully.

Switch off the appliance immediately in the event of failure or malfunction. Only trained technicians may service the machine. Regular checks, as mentioned in the manual, should be carried out as per the instructions. The machine should be serviced by a person authorised to do so by the manufacturer. Use original spare parts. Contact an authorised service company to draw up a programme for preventative care. Dangerous situations may arise if the above is not followed.

Before using the machine, ensure that personnel are given the requisite training in handling and care of the machine.

2.2 Transport

Handle the machine with care during unloading and transport to avoid tipping. Never lift or move the machine without the wooden packaging supporting the stand.

2.3 Installation

The electrical cabinet may only be opened by a qualified electrician or trained personnel. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.

Connection of water pipes must only be carried out by authorised personnel.

Connection of water pipes must be carried out in a manner that complies with the regulations of the local water supply authority. Check the tightness of the water connections before operating the machine.

Make sure that the mains voltage is the same as that indicated on the machine's rating plate. The machine should be connected to a lockable main switch.

2.4 Detergent and drying agent

Only detergent and drying agent intended for industrial dishwashing machines are to be used. Washing-up liquid must not be used in the machine or for pre-treating items (soaking, pre-washing, etc.). Contact your detergent supplier regarding the selection of a suitable detergent.

Be aware of the risk of handling washing and drying agents. Protective gloves and goggles should be used when handling machine dishwashing detergent. Read the warning text on the detergent and drying agent containers as well as the regulations of the detergent supplier.

2.5 Operation

2.5.1 Hot water

The temperature of the washing and rinsing water is 60°C and 85°C. Do not open the door until the washing and rinsing phase is finished.

2.5.2 Risk of crushing

Be careful when closing the door to avoid crush damage.

2.6 Cleaning the machine

The temperature of the water in the tank is approx. 60°C and contains detergent. Be careful when emptying and cleaning the machine. Use protective gloves.

2.6.1 Cleaning with high-pressure washing

High-pressure washing must not be used for washing the inside or outside of the machine.

In order to satisfy current requirements, electrical components of approved enclosure classes are used. There is no enclosure class capable of withstanding high pressure.

2.6.2 Outside the machine

Pressure washers and hoses must not be used to wash the outside of the machine. Water can penetrate into the electrical cabinet and the control panel and damage the equipment, which may affect the safety of the machine.

2.7 Cleaning the floor

When cleaning floors using high-pressure equipment, water can splash up under the machine and damage the components. These have not been designed to withstand rinsing with water. Never use high pressure washes on the floor less than 1 metre from the dishwasher without using the special protective covers available to prevent splashes. Problems with splashing can also occur when using ordinary water hoses.

2.8 Repairs and maintenance of the machine

Switch off the power before removing the front panel. Avoid contact with hot pipes and the booster heater.

Check the following:

- Does the display show any error messages?
- Has the appliance been used according to the instructions?
- Are all removable parts present?
- Is the main switch in the ON position?
- Are the fuses in the electrical cabinet complete? Ask service personnel to check the fuses.

If nothing else helps, ask the authorised service personnel to check the machine.

2.9 Recycling the machine

Recycling of the appliance when its economical lifetime has been reached must be carried out in accordance with current rules and regulations. Contact professional personnel specialising in recycling.

3. Installation

3.1 General

The machine must be installed by authorised personnel only.

Read these instructions through carefully as they contain important information regarding correct installation.

The instructions should be used together with the machine's wiring diagram and flow diagram.

The machine is CE-marked. The CE-mark is only valid for the machines with the original design. If the machine is damaged as a result of the instructions not being followed, the supplier guarantee and product liability ceases.

3.2 Requirements for installation on site

3.2.1 Lighting

In order to ensure the best possible working conditions during installation, operation, service and maintenance, make sure that the machine is installed in a well-lit room.

3.2.2 Ventilation

The machine generates heat and steam when in operation. For a good working environment, a certain air change rate is required in the washing room. The ventilation requirements for the room are dimensioned as per applicable standars.

3.2.3 Drain

There must be a floor drain for the machine's waste water. The floor drain capacity can be found in TECHNICAL SPECIFICATIONS.

3.2.4 Service space

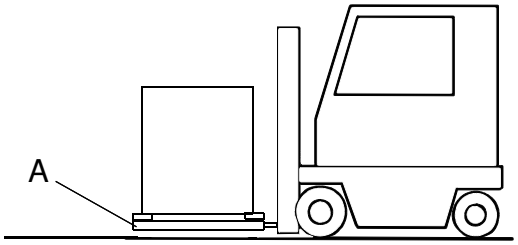
A 1-metre free space should be allowed in front of the machine for service purposes.

3.3 Transport and storage

Always transport the machine in an upright position.

Take care during transport, as there is a risk of tipping.

NB! The machine must not be transported without a pallet or other support. The machine may be damaged otherwise. When transporting the machine without the ordinary wooden pallet, always check that none of the machine components can be damaged.



A=Wooden pallet

If the machine is not being installed straight away, it must be stored frost-free in premises with dry air.

3.3.1 Unpacking

Remove the packing material. Inspect the machine for any transport damage.

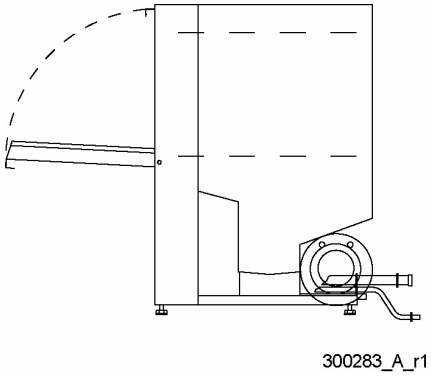
Check that all parts have been delivered by comparing them with the delivery slip.

3.3.2 Recycling the packaging

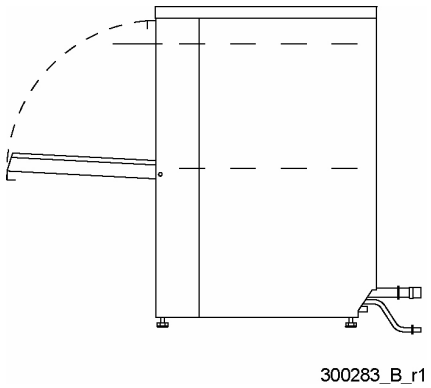
Packaging must be sent for destruction or recycling in accordance with local regulations.

3.4 Installation

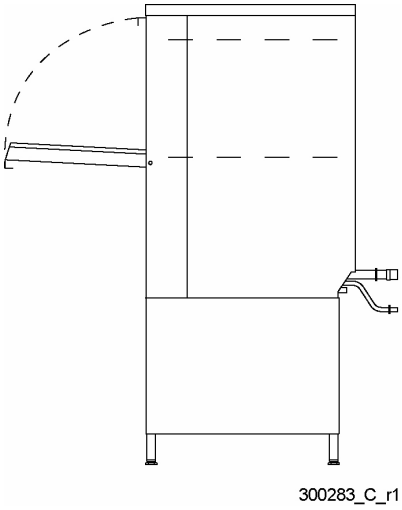
Check that the overheating protection on the booster heater is set to zero.



Machine for built-in



Self-contained machine



Self-contained machine with bottom frame

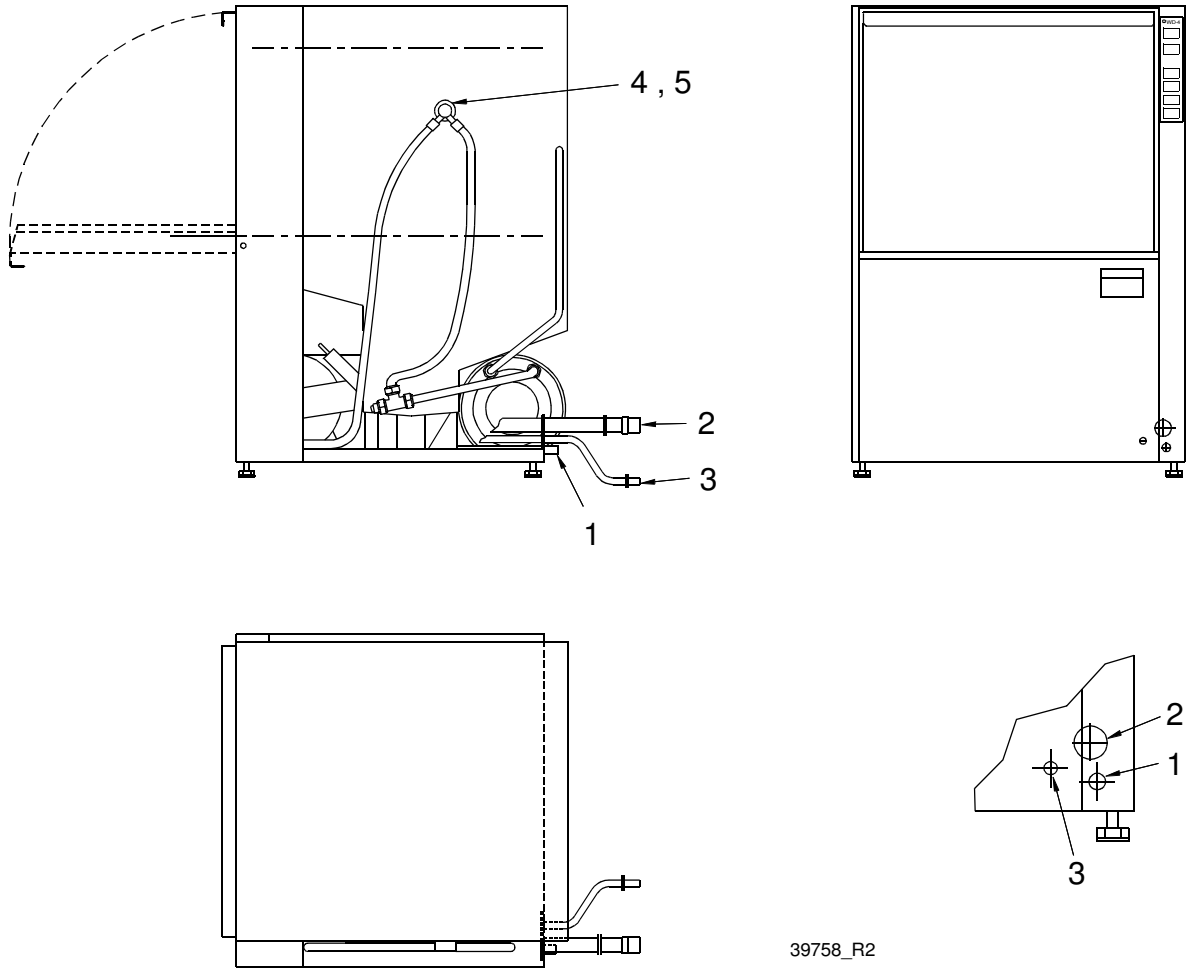
3.4.1 Positioning the machine

Position the machine and check that it is horizontal using a spirit level.

Once the machine has been filled with water, check that it is level.

Adjust the height with the machine legs.

3.4.2 Connections



1. Water connection, external thread
2. Drain connection, spiral hose
3. Electrical connection
4. Non-return valve
5. Vacuum valve

3.4.3 Electrical connection

This symbol on a machine part warns of electrical equipment. The part may only be removed by a qualified electrician. The machine is sensitive to electrostatic discharge (ESD), which is why a static electricity bracelet must be used when handling the electronics.

Information on electrical connection is shown on the machine's wiring diagram. This is located on the inside of the front plate.

The machine should be connected to a lockable main switch. This should be placed on the wall well protected against water and steam emissions when opening the door.

The machine is supplied with the electrical cable connected.

3.4.4 Water connection

The water pipe is connected at (1). If the machine is connected with a hose, the internal diameter of the hose must be at least 12 mm.

The required water flow and pressure can be found in the TECHNICAL SPECIFIKATIONS.

A shut-off cock must be installed on the incoming pipe.

3.4.5 Drain connection. Machine without emptying pump

The drain connection (2) consists of a spiral hose. The drain is run to a floor drain, where it must end above the water level.

3.4.6 Drain connection. Machine with emptying pump

The drain connection (2) consists of a spiral hose. The drain is run to a washing-up sink where it must end at least 25 mm above the washing-up sink.

3.4.7 Detergent and drying agent connection

Bushing for hoses is located on the rear of the machine.

Drying agent equipment is included in the machine delivery. Connect the drying agent injector's suction hose to the drying agent tank.

Detergent equipment for liquid detergent is extra equipment.

Determining the detergent and drying agent dosing is described in ADJUSTMENT INSTRUCTIONS.

Electrical connections, see wiring diagram.

The machine can also be equipped with detergent and drying agent equipment via "external" connections. See the wiring diagram for correct connection.

3.5 Settings options for detergent and drying agent equipment (option)

Check which equipment is fitted to the machine before starting work.

Switch off the power supply to the machine at the mains switch before starting work in the electrical cabinet.

The first section "24V AC or 230V AC power supply for detergent and drying agent dosing via relay 9/J71 and relay 11/J73" explains how the contacts are supplied with the relevant voltage.

The second section "Settings options for relay 9/J71 and relay 11/J73" describes the different settings available and how they can be changed.

3.5.1 24V AC or 230V AC power supply for detergent and drying agent dosing via relay 9/J71 and relay 11/J73

The detergent and drying agent dosage system can take its power from two relays on the data card. The relays can be dead, with no power supply, (trigger function) or they can be connected to a 24V AC or 230V AC supply to power the dosage system. Each relay has a contact for connecting the equipment. Relay 9 for detergent is connected via a 3-pin J71 contact. Relay 11 for drying agent is connected via a 2-pin J73 contact.

For right connection at X10 see the machines wiring diagram.

230V AC equipment should not draw more than 1.5A.

24V AC equipment should not draw more than 1.5A.

The time and method for switching on the relays is determined by the settings in the table of reference values. See the section "Settings options for relay 9/J71 and relay 11/J73".

Relay 9/J71. Dead closing function (trigger function) (230V/400V machine)

To use the closing function without a power supply, follow these instructions:

1. Contact the equipment to be controlled to contacts J71-101 and J71-105.

Relay 9/J71. 230V AC version (400V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

1. Connect a blue 0.75mm² wire from connector N1 or N2 in the electrical cabinet to contact J71-102.
2. Connect a black 0.75mm² wire from connector X10 to contact J71-105.
3. Connect the equipment to be controlled to contacts J71-101 and J71-102. There will be two wires connected to contact J71-102.

Relay 9/J71. 230V AC version (230V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

1. Connect a black 0.75mm² wire from connector X10 in the centre of the electrical cabinet to contact J71-102.
2. Connect a black 0.75mm² wire from connector X10 to contact J71-105.
3. Connect the equipment to be controlled to contacts J71-101 and J71-102. There will be two wires connected to contact J71-102.

Relay 9/J71. Relay 9. 24V AC version (230V/400V 3-phase machine)

To connect a 24V AC power supply to the contact, follow these instructions:

1. Connect a red 0.75mm² wire from connector X10 in the electrical cabinet to contact J71-102.
2. Connect a red 0.75mm² wire from the 8-pin contact on the data card labelled J69-8 to contact J71-105.
3. Connect the equipment to be controlled to contacts J71-101 and J71-102. There will be two wires connected to contact J71-102.

Relay 11/J73. Dead closing function (trigger function) (230V/400V 3-phase machine)

To use the closing function without a power supply, follow these instructions:

1. Contact the equipment to be controlled to contacts J73-103 and J73-104.

Relay 11/J73. 230V AC version (400V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

1. If a 230V AC version of J71 is fitted: Connect J71-105 to J73-104 using a black 0.75mm² wire.
2. If J71 is not fitted or is not a 230V AC version: Connect a black 0.75mm² wire from connector X10 to contact J73-104.
3. Connect the equipment to be controlled between contact J73-103 and connector N1 or N2 in the electrical cabinet.

Relay 11/J73. 230V AC version (230V 3-phase machine)

To connect a 230V AC power supply to the contact, follow these instructions:

1. If a 230V AC version of J71 is fitted: Connect J71-105 to J73-104 using a black 0.75mm² wire.
2. If J71 is not fitted or is not a 230V AC version: Connect a black 0.75mm² wire from connector X10 to contact J73-104.
3. Connect the equipment to be controlled between contact J73-103 and connector X10 in the electrical cabinet.

Relay 11/J73. Relay 11. 24V AC version (230V/400V 3-phase machine)

To connect a 24V AC power supply to the contact, follow these instructions:

1. If a 24V AC version of J71 is fitted: Connect J71-105 to J73-104 using a red 0.75mm² wire.
2. If J71 is not fitted or is not a 24V AC version: Connect a red 0.75mm² wire from the 8-pin contact on the data card labelled J69-8 (24V) to contact J73-104.
3. Connect the equipment to be controlled between contact J73-103 and connector X10 in the electrical cabinet.

3.5.2 Settings options for relay 9/J71

The function of relay 9/J71 can only be influenced by the reference value on row 22.

Relay 9/J71. Set/change the dosage interval during filling and final rinse.

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Increase the setting by pressing "P2".
5. Reduce the setting by pressing "P3".
6. Leave S1 mode by pressing the 0/1 button.
7. The setting is saved when you leave S1 mode.
8. The new value will be used next time the machine is filled or after the next final rinse.

Relay 9/J71. Constant voltage when the machine is started

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Change the setting to "00".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

Relay 9/J71. Parallel operation with the chemical pump

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 22.
4. Change the setting to "99".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

3.5.3 Settings options for relay 11/J73

Set the correct function for relay 11/J73 by ensuring that the reference value on row 105 is set to "0", which corresponds to "external dosing of drying agent", before starting on the settings on row 23.

Relay 11/J73. Set/change the dosage interval during filling and final rinse.

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Increase the setting by pressing "P2".
5. Reduce the setting by pressing "P3".
6. Leave S1 mode by pressing the 0/1 button.
7. The setting is saved when you leave S1 mode.
8. The new value will be used during the next final rinse.

Relay 11/J73. Parallel operation with the final rinse valve (hose pump)

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Change the setting to "00".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

Relay 11/J73. Parallel operation with the chemical pump

1. Switch on the power to the machine.
2. Go into S1 mode, by pressing the service button on the data card.
3. Go to row 23.
4. Change the setting to "99".
5. Leave S1 mode by pressing the 0/1 button.
6. The setting is saved when you leave S1 mode.
7. The new value will be used as soon as it is applicable.

3.6 Trial run

Prepare the machine for a trial run using the DIRECTIONS FOR USE. This describes the measures that must be taken to make the machine ready for operation.

3.6.1 Start-up schedule

This should be completed and acknowledged by the customer on start-up.

Machine type:

Machine number:

Installation date:

Customer:
Postal address:
Telephone:
Contact person:

Dealer:
Telephone:
Contact person:

Installation company:
Telephone:
Contact person:

Service company:
Telephone:

Detergent supplier:
Telephone:

End user’s signature:

Name in block capitals:

Read the contents of the Installation and User manual carefully. Then check off as follows:

1. Check:

- Water and drain connections
- That the machine is evenly balanced
- Detergent and drying agent
- Filters and level pipe are in place
- The overheating protection on the booster heater is set to zero.

2. Filling the machine:

- Turn on main switch
- Close the door
- Press the 0/1 button
- Fill the machine with water as per the INSTRUCTIONS FOR USE

3. Start the machine:

- Check the pump's direction of rotation NB! If the pump is rotation in the wrong direction, the phase must be inverted on the lockable main switch.
- Empty the machine and refill
- Check the final rinse flow during fillingNote: If the flow is correct, the machine will fill in 1.5 min. The flow is regulated by the built-in ball valve.

4. Check the setting of reference values:

- All reference values are set to the recommended values on delivery
- Check the temperatures

5. Run a number of washes complete with loads and check that:

- There are no water leaks
- The door breaker works
- The water temperatures are maintained
- The washed items are clean
- The washed items dry off Note: The equipment for detergent and drying agent is roughly set at the factory; contact your detergent supplier for a more precise setting.

6. Final check: Empty the machine and turn off the power using the main switch.

- Re-tighten all connections on contactors and any circuit breakers
- Set all circuit breakers to ON position
- Put up the accompanying care instructions

7. Train dishwashing staff

3.7 Technical documentation

For correct use and servicing, it is essential that the documentation accompanying the machine is made available to personnel who will be using the machine. The installation and user manual, which describes handling and care among other things, should be stored near the machine.

If the service manual accompanies the delivery, this should be passed on to the responsible service technician later on.

If the spare parts manual accompanies the delivery, this should be passed on to the responsible service technician later on.

If the WEB Tool manual is supplied with the machine, it must be kept near the machine.

4. Directions for use

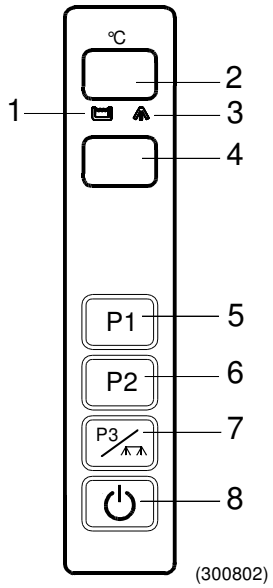
All personnel using the machine should be trained in how the machine works by the person responsible for staff safety.

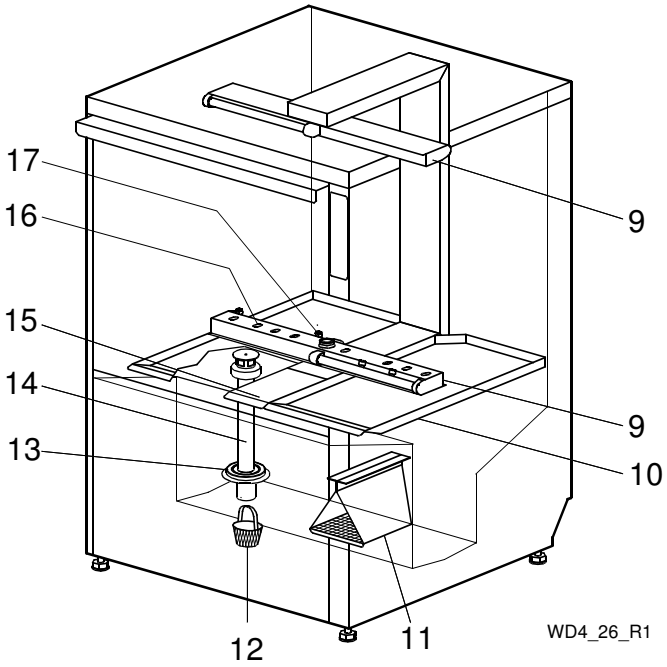
The dishwasher should not be used by anyone suffering from a physical or mental illness.

Children should be watched closely to ensure that they do not play with the machine.

4.1 Preparations

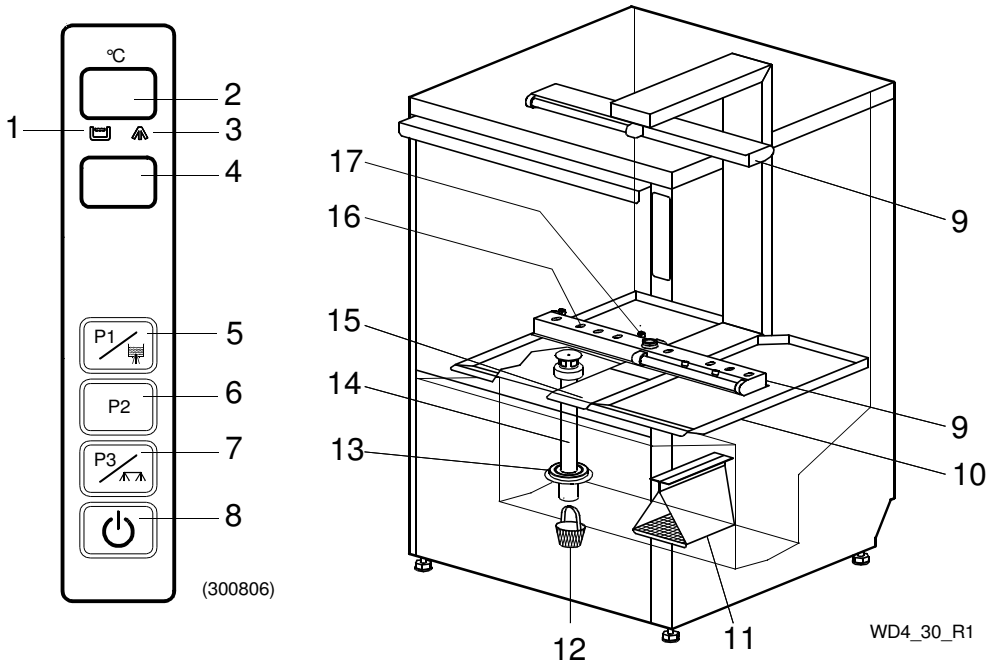
4.1.1 The machine's design, without emptying pump





1. Symbol for washing function. The symbol flashes if the water level in the tank is too low.
2. Display for temperature.
3. Symbol for final rinse. The symbol flashes if the rinse temperature is too low.
4. Display for program.
5. Button for washing program P1.
6. Button for washing program P2.
7. Button for washing program P3 or internal cleaning following a washing program.
8. On/Off button
9. Washer arm
10. Tank filter
11. Pump filter
12. Drain filter
13. Rubber seal
14. Level pipe
15. Cover plate
16. Wash nozzle
17. Rinse nozzle

4.1.2 The machine's design, with emptying pump



1. Symbol for washing function. The symbol flashes if the water level in the tank is too low.
2. Display for temperature.
3. Symbol for final rinse. The symbol flashes if the rinse temperature is too low.
4. Display for program.
5. Button for washing program P1, or emptying following a washing program.
6. Button for washing program P2.
7. Button for washing program P3 or internal cleaning following a washing program.
8. On/Off button
9. Washer arm
10. Tank filter
11. Pump filter
12. Drain filter
13. Rubber seal
14. Level pipe
15. Cover plate
16. Wash nozzle
17. Rinse nozzle

4.1.3 Preparations before filling, with or without emptying pump

Check:

- that the dishwasher and all removable components are clean and that there is no dirt in the washer and rinse arms' nozzles (16, 17).
- that the rubber seal (13) is undamaged.
- that the shut-off cock for the water is open.
- the amount of detergent and drying agent.

Washing-up liquid must not be used in the machine or for pre-treating items (soaking, pre-washing, etc.).

Fit:

The drain filter (12), level pipe (14), pump filter (11), tank filters (10), cover plate (15). The level pipe's rubber seal (13) must be sealed against the bottom plate.

Close the door.

4.1.4 Filling the machine, with or without emptying pump

- Switch on the power using the 0/1 button (8) on the panel. The display (2) shows the temperature of the rinsing water. The display (4) shows P0. P0 is a pause mode that indicates no washing program has been selected.
- Once the door is closed the filling of the machine begins. Heating time is dependent on incoming water temperature.
- Once the machine is full, the symbol (1) lights up and the display (2) shows the temperature of the washing water. If the washing temperature falls below the set value by more than 5°C, the temperature display in the display (2) flashes.
- Washing cannot commence until the correct temperature -5°C is reached, if this function is selected. The normal operating temperature for the washing phase is 60°C. If the temperature of the washing water falls below 50°C, the temperature display flashes.

4.2 Use

4.2.1 Program selection, with or without emptying pump

The control panel has three program buttons: P1, P2 and P3.

- P1 = Lightly soiled items (e.g. trays and glassware)
- P2 = Normal washing
- P3 = Heavily soiled items

The washing temperature and chemical washing time for each program is set on delivery. The operator can change these values if required.

4.2.2 Changing the washing temperature and washing time, with or without emptying pump

The factory setting for the washing temperature is 60°C. The operator can adjust the temperature to between 55 and 70°C.

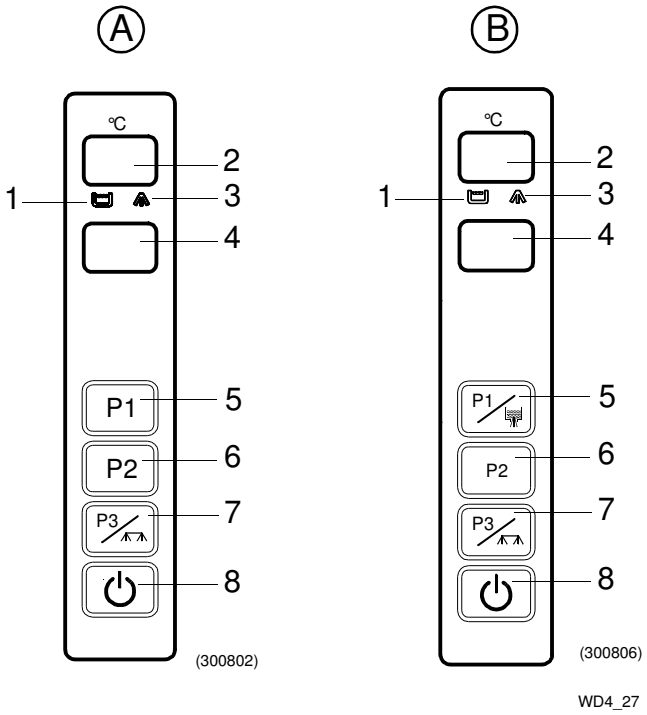
The chemical washing times for each program are set on delivery to:

- 1.0 min. (program P1)
- 2.2 min. (program P2)
- 4.0 min. (program P3)

The washing times can be adjusted between 1.0 and 6.0 min.

Changing the values. Engaging service mode

The machine must be reset to "service mode" if the operator is to change a value. This is done on the control panel. The values that can be changed flash. The displays and buttons have different functions when the machine is in normal operating mode.



The panel's functions in service mode.
A=without emptying pump
B=with emptying pump

1. Symbol for washing function.
2. Display for showing table numbers and row numbers of each table.
3. Symbol for final rinse.
4. Display for showing values and other information for all row numbers in the tables.
5. Use the P1 button to move between the table rows or to reset the values to those last saved.
6. Use the P2 button to increase a value or navigate forwards between the tables.
7. Use the P3 button to reduce a value or navigate backwards between the tables.
8. Use the 0/1 button to enter or exit service mode.

All the values are laid out in "tables", with each table containing a certain number of rows, one for each value. The table containing the values for the washing temperature and washing times for the different programs is called "0.0".

The values for washing temperature and washing times are on the rows 01 to 04 (inclusive) in table "0.0".

Table 0.0		
Row number	Specifying	Settings range
01	Washing temperature	55 - 70℃
02	Washing time program P1	1,0 - 6,0 min.
03	Washing time program P2	1,0 - 6,0 min.
04	Washing time program P3	1,0 - 6,0 min.

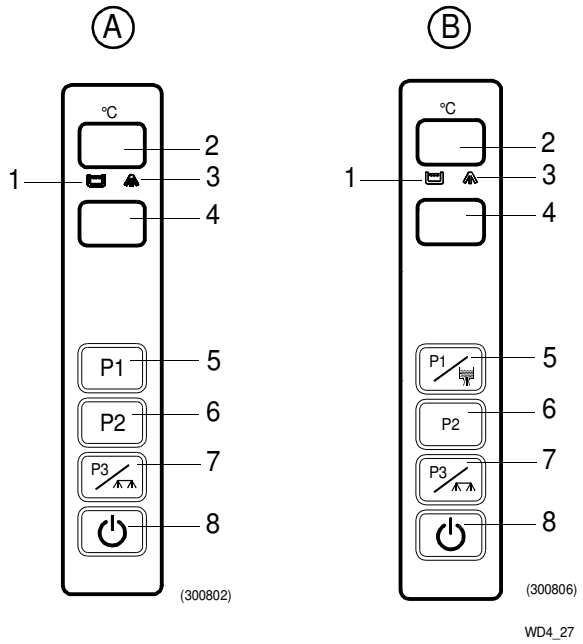
Engaging service mode, together with changing washing temperature and washing time, is done as follows:

- When moving to "service mode", the washing program must be finished.
- Press 0/1 (8). Both the displays will now show two horizontal dashes "--" and the machine will be in shut-off mode.
- Hold the 0/1 button down for approx. 3 seconds until the top display (2) shows "0.0". When the display shows "0.0" the machine will be in service mode.
- Press P1. The top display (2) will now show 01, the first row number in the table. The bottom display (4) shows the set washing temperature flashing; only values that flash when they are shown can be changed. If the temperature is to be changed, press P2 to increase the value or P3 to reduce the value.
- If the washing time for a program is to be changed, use P1 to move to the next row number in the table. For explanations for row numbers 01, 02, 03 and 04, see table "0.0" above.
- When the settings are complete, exit service mode by holding down the 0/1 button (8) for approx. 3 seconds until the displays show two horizontal dashes "--". The changed values are now saved.
- Return to normal operating mode by then quickly pressing the 0/1 button.

4.2.3 Washing, with or without emptying pump

The items must not be soaked or pre-washed with ordinary washing-up liquid.

Make sure that the dishes are in a position where they cannot move out of the wash basket during the wash and rinse phases.



A=without emptying pump
B=with emptying pump

- Remove larger food particles by rinsing the items using a hand shower. The water in the hand shower must not exceed 40°C. Place the items to be washed in the basket.
- Push the basket into the machine and close the door. Select program P1, P2 or P3.
- The machine starts washing with the selected program. The display (4) now shows the program's remaining washing time.
- The symbol (1) is lit during the washing phase.
- Once the rinsing phase starts, the symbol (3) lights up. If the final rinse water has not reached the correct rinse temperature once rinsing starts, the symbol (3) flashes and the machine washes until the rinsing water has reached the correct temperature.
- Do not open the door before the program has finished.
- Once the machine has stopped, the display (4) shows P0. Remove the washing basket and allow the washed items to dry.

P0 is a pause mode and is used for prolonged intervals between washes to maintain the tank temperature. The door must be closed at these times. The machine does not start in P0 mode.

The door must be opened and closed between each washing cycle.

4.2.4 Changing the water

For optimum washing results, it is important that the water be changed frequently. For normally soiled items, the washing water should be changed after around 30 washes. Always change the water in the event of foam problems in the tank.

If IF09 is shown on the display, this is to tell you that the water should be changed.

When the machine is in P0 mode with the door open and the symbol (3) is lit, change the water as follows:

Machines without an emptying pump

- Check that the machine is in P0 mode.
- Open the door.
- Remove tank filters (10) and the cover plate (15).
- Empty the machine by removing the level pipe (14).
- When the tank is empty, refit the level pipe (14), tank filters (10) and the cover plate (15).
- Check that the final rinse symbol (3) is lit.
- Close the door and the machine will refill.

Machines with an emptying pump

- Check that the machine is in P0 mode.
- Open the door.
- Remove tank filters (10), the cover plate (15) and the level pipe (14).
- Press 0/1 (8).
- Press P1 (5) to start the emptying pump; "dP" is shown on the display (2).
- When the tank is empty, refit the level pipe (14), tank filters (10) and the cover plate (15).
- Press 0/1 (8).
- Check that the final rinse symbol (3) is lit.
- Close the door and the machine will refill.

4.3 After use - Cleaning

HACCP

HACCP is a preventive inspection system to ensure hygiene requirements during the washing process and cleaning of the machine. Thanks to its design, the machine meets strict hygiene requirements. From a hygiene point of view, regular and thorough cleaning is also important. A well-cleaned machine contributes to excellent cleaning results and reduces the risk of dirt accumulating inside the machine.

4.3.1 Emptying, internal machine rinsing, without emptying pump

When the machine is switched off, the number of baskets washed is first displayed for around 5 seconds.

Two horizontal dashes "--" are then shown in the display for less than 3 minutes. During this time, the machine is still live and emptying and internal cleaning must take place within this period. The machine then switches off automatically.

- Press 0/1 (8) on the panel. Remove tank filters (10) and the cover plate (15) from the machine. Empty the water from the machine by removing the level pipe (14).
- Close the door. Press P3 (7). The display (2) shows "SC" and the internal rinsing starts. The display (4) shows the remaining rinsing time. After the rinsing is complete, both the displays show two horizontal dashes "--".
- Open the door. Check the washing and rinsing nozzles (16, 17) are clean and that no objects have fallen and lodged in the machine.
- Remove and clean the pump filter (11) and drain filter (12). Clean the tank filters (10), cover plate (14) and the level pipe (13).
- Store the cleaned parts in a washing basket. Ensure that the level pipe's rubber seal (13) does not become deformed, by allowing it to hang free.

4.3.2 Emptying, internal machine rinsing, with emptying pump

When the machine is switched off, the number of baskets washed is first displayed for around 5 seconds.

Two horizontal dashes "--" are then shown in the display for less than 3 minutes. During this time, the machine is still live and emptying and internal cleaning must take place within this period. The machine then switches off automatically.

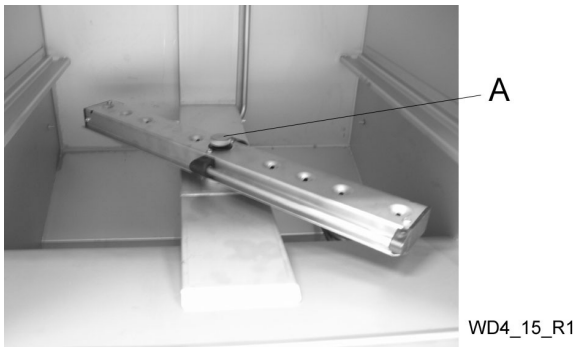
- Press 0/1 (8) on the panel. Remove tank filters (10) and the cover plate (15) from the machine. Remove the level pipe (14).
- Press P1 (5). The top display (2) shows "dP" and the emptying pump starts. It stops automatically after a set period.
- Once the machine has been emptied, close the door. Press P3 (7). The display (2) shows "SC" and the internal rinsing starts. The display (4) shows the remaining rinsing time. After the rinsing is complete and the rinsing water has been emptied out, both the displays show two horizontal dashes "--".
- Open the door. Check the washing and rinsing nozzles (16, 17) are clean and that no objects have fallen and lodged in the machine.
- Remove and clean the pump filter (11) and drain filter (12). Clean the tank filters (10), cover plate (15) and the level pipe (14).
- Store the cleaned parts in a washing basket. Ensure that the level pipe's rubber seal (13) does not become deformed, by allowing it to hang free.

4.3.3 Cleaning each week

Weekly cleaning should be carried out more thoroughly than daily cleaning. If the information message "IF10" is shown on the display, this is to tell you that weekly cleaning needs to be done.

In addition to the measures for daily cleaning, clean the machine as follows:

- Remove the washing arms. Loosen the lock nut (A) in the centre of the washing arm and remove the washing arm. Check and clean nozzles if necessary. Rinse the washing arms and refit them.



A=Lock nut

4.3.4 External cleaning

Wipe the outside of the machine with a soft, damp cloth.

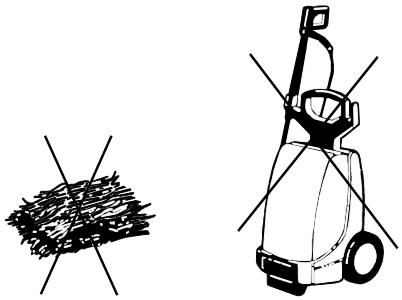
If detergent is used, it must not contain abrasives. Detergents containing abrasives will damage the stainless steel panels.

The machine must not be hosed down externally. Water can enter the control panel and damage electrical equipment.

4.3.5 Incorrect cleaning methods

NB! An incorrect cleaning method may damage the machine. The following therefore applies:

- Do NOT use steel wool as it will corrode the machine.
- High-pressure cleaning can damage the machine and must NOT be used for cleaning purposes. Never use high pressure cleaning on the floor less than 1 metre from the dishwasher without the special protective covers available to prevent splashes. The supplier cannot be held responsible for any faults caused by the use of high-pressure washes on the machine and such action will void the guarantee.



WD4_16

There is a risk of splashing even if the floor is hosed down.

4.3.6 Operational disturbances

Error messages

When in operation, various alarms or information messages can be shown on both the control panel displays. We distinguish between IF and Er alarms. IF alarms can normally be dealt with by the operator. If there is an Er alarm, responsible service personnel must be called. Some IF alarms that have been dealt with by the operator a few times will eventually change to Er alarms, meaning service personnel must be contacted.

Each alarm has a number, 01, 02, 03 etc. The top display shows either IF or Er; the bottom display shows the alarm number.

The table shows only the alarms that the operator can deal with or temporarily reset to zero using the 0/1 button on the panel.

CODE	CAUSE	ACTION
IF01 / Er01	The filling time has been exceeded without the tank being filled.	The alarm can be reset by pressing 0/1 on the panel.
	Level pipe not in place.	Fit level pipe.
	The level pipe's rubber seal is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber seal has not been damaged. Replace damaged seal.
	The shut-off cock for water is closed.	Open the cock.
Er02	The tank temperature is less than the nominal value after a set period of time.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel.
Er04	Temperature sensor B41 incorrect.	Contact service personnel.
Er05	Temperature sensor B21 incorrect.	Contact service personnel.
IF06 / Er06	The booster heater is not cooled during the final rinsing phase.	The alarm can be reset by pressing 0/1 on the panel.
	The shut-off cock for water is closed.	Open the cock. Close the door.
IF09	Alarm for changing the water.	Change water. The alarm can be reset by pressing 0/1 on the panel if it is not set to stop the machine.
IF10	Alarm for weekly cleaning.	The machine must be cleaned more thoroughly than during the daily cleaning. The alarm can be reset by pressing 0/1 on the panel.
Er12	The break tank has not filled with water.	The alarm is reset automatically when the tank is full.
Er16	The temperature in the booster heater is too low.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel.
Er27	The set values have been corrupted.	Contact service personnel.
IF30	Low water level in the washing tank.	Check that the level pipe is closed. The alarm can be reset by pressing 0/1 on the panel.
	The level pipe's rubber seal is leaking.	Check that the level pipe's rubber seal has not been damaged.
IF34	Detergent alarm.	The alarm can be reset by pressing 0/1 on the panel.
	Detergent required.	Check the amount of detergent and refill when necessary.
IF35	The washing tank does not fill with water.	Open and close the door to start the filling. The alarm can be reset by pressing 0/1 on the panel.
Er96	The motor safety cut-out for the pump has tripped.	Contact service personnel.
Er97	One digital input is shorted to ground.	Contact service personnel.
Er98	No contact between the CPU and computer card.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.
Er99	No contact between the computer and panel card.	The alarm can be reset by pressing 0/1 on the panel. Contact service personnel if the alarm recurs.

Troubleshooting

The following errors can be dealt with by the operator. If the problem persists, contact responsible service personnel.

PROBLEM	CAUSE	ACTION
The machine does not start.	Main switch off.	Turn on main switch
The machine does not fill with water.	Shut-off cock for incoming water is closed.	Open cock.
	The door is open.	Close the door.
	Level pipe not in place.	Fit level pipe.
	The level pipe's rubber seal is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber seal has not been damaged. Change damaged rubber seal.
	The rinsing pipes' nozzles are blocked.	Clean the rinsing nozzles.
The machine is filling slowly.	The rinsing pipes' nozzles are blocked.	Clean the rinsing nozzles.
Filling does not stop.	Level pipe not in place.	Fit level pipe.
	The level pipe's rubber seal is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber seal has not been damaged. Change damaged rubber seal.
Machine will not start washing.	The door is open.	Close the door.
	Dishes are blocking the magnet on the hood/door.	Remove the dishes.
Noise from wash pump.	Low water level. Foam in tank.	Check level. Change water.
The machine stops in the middle of the washing cycle and starts taking in water.	The level pipe's rubber seal is not sealing against the bottom plate.	Adjust the level pipe. Check that the rubber seal has not been damaged. Change damaged rubber seal.
The machine is not cleaning properly.	Rinse and wash nozzles clogged with dirt.	Check and clean nozzles.
	Too little detergent.	Check the amount of detergent. The hose must be submerged in liquid and the filter in the hose must be clean.
	Water in tank too dirty.	Change water.
	Foam forming in tank.	Check that the washing temperature is not too low and that the correct detergent is being used.
	Dirt has dried on items.	Soak items before washing.
	Items incorrectly positioned in baskets.	Use the right type of washing basket and accessories for the correct placement of items.
Dishes upset in the baskets.	Items incorrectly positioned in baskets.	Reposition items.
	Light items need washing.	Use a net grid to hold utensils.
Washed items won't dry.	Rinse nozzles clogged.	Check and clean nozzles.
	Too little rinsing agent.	Check the amount of rinsing agent. The hose must be submerged in liquid and the filter in the hose must be clean.
	The washing has been left in the machine.	Remove the washed items once the program has ended.

When you contact service personnel, you will need to provide the following information:

- Machine type and model
- Machine serial number and installation date
- Short description of the fault/problem
- What happened/was being done immediately before the fault occurred

5. Technical information

We reserve the right to change technical data.

General data	
Pump motor (kW)	0,74
Booster heater (kW) *	3/9*
Tank heat (kW)	1,8
Tank volume (liter)	25
Weight, machine in operation (kg) **	120
Degree of protection (IP)	44

* Optional

* * Freestanding design

Capacity and operation data	
Total time/wash program 1 (min) **	1,2
Total time/wash program 2 (min) **	2,4
Total time/wash program 3 (min) **	4,2
Max. capacity, baskets/h (pcs) ***	20/50
Basket size (mm)	500x500
Rinse water consumption/programme (litres) ****	2,5-3,7
Sound level (dB (A)) *	62
Max. surface temperature at room temp. 20℃ (℃)	35

* Freestanding model, measured 1 metre from the machine

** Factory setting. The wash time is adjustable.

*** With 9kW booster heater (optional)

**** Applies under ideal conditions. The water consumption depends on the local conditions. Fine adjustments can be made during installation.

Connection, machine	
Total connected power (kW) *	5,54/9,74
Main fuse 400V 3N~ (A)**	10/16
Max. connection area 400V 3N~ (L1-L3,N,PE) Cu (mm²) ***	2,5

* With 9kW booster heater (optional)

** Other voltages on request

*** Cable 2 m included

Connection water, drain and ventilation	
Recommended quality of water (hardness) (°dH)	2-7
Hot water connection 50-70°C (external thread)	R½
Cold water connection 5-12°C (external thread) *	R½
Drain connection, hose (mm)	22
Water connection pressure (kPa)	180
Water flow (liter/min)	17
Floor drain, capacity (litres/sek)	1

* Recommended only in combination with a 9kW booster heater

Size and weight for transportation	
Size, LxWxH (mm) *	765x710x1025
Weight (kg) *	97

* Packaging included

Wexiödisk

CE Declaration of Conformity

This declaration of conformity only refers to the machine/product in the condition in which it is supplied, not any additions or modifications made by the customer/user.

Manufacturer: Wexiödisk AB Mårdvägen 4 S-352 45 Växjö, Sweden Tel: +46 470 77 12 00 Fax: +46 470 237 52
Representative: Metos Oy AB
Compiler of technical documentation: Magnus Ericsson

Our machines are manufactured 2012 in accordance with applicable EU directives and we declare under sole responsibility that the following products:

Single tank dishwashers with accessories:
WD-4x, WD-6x, WD-7, WD-PRM6/7

Pot wash machines:
WD-12, WD-90x, WD-100GR

Tunnel dishwashers with accessories:
WD-11, WD-151C/211C, WD-151E/211E/241E/331E/421E, WD-153/213/243/333/423
WD-215T, WD-PRM60/90, WD-T60/60F/80/120, WD-C90/180, WD-BF90/180

Conveyor dishwashers*:
WD-B xxx, WD-xxCT, WD-40BRE, ACS-38/47

Special dishwashers*:
WD-18CW, WD-25BR, WD-25T, WD-8020/8020W/8020WL/9020/9020W, ACS 400HC, ACS 800

Conform to the following directives:

EU Declaration of Conformity
according to EU's Machinery Directive 2006/42/EG, annex IIA.
Harmonised standards
EN 12 100-1 Machine safety: specification for general requirements, part 1
EN 12 100-2 Machine safety: specification for general requirements, part 2.
EN 60 204-1 Machine safety: electrical equipping of machines: general requirements

EU Declaration of Conformity
according to EU's Low-voltage directive 2006/95/EC.
Harmonised standards
EN 60 529 Specification for degrees of protection provided by enclosures (IP code).

For products marked with *
EN 60 204-1 Machine safety: electrical equipping of machines: general requirements

For other products
EN 60 335-1 Safety of household and similar electrical appliances - General requirements.
EN 60 335-2-58 Specification for safety of household and similar electrical appliances. Particular requirements. Commercial electric dishwashing machines.
EN 50106 Safety - Particular rules for routine tests.

EU Declaration of Conformity
according to EU's EMC-directive 2004/108/EC.
Harmonised standards
EN 61 000-6-2 Electromagnetic compatibility (EMC). Generic standards. Immunity standard for industrial environments.
EN 55 014-1 Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. (EMC) - Part 1: Emission

Växjö 2012-01-02

Torsten Nyberg
Managing Director